

(No Model.)

E. WRIGHT.

TOP ROLL FOR SPINNING MACHINES.

No. 395,938.

Patented Jan. 8, 1889.

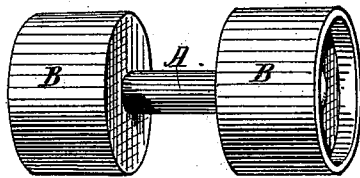


FIG. 1

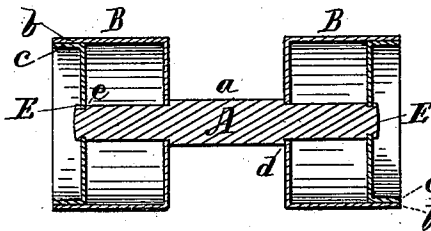


FIG. 2

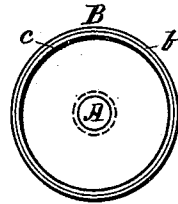


FIG. 3

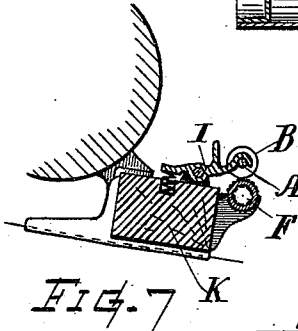


FIG. 7



FIG. 4

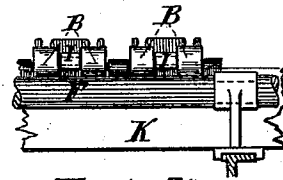


FIG. 8

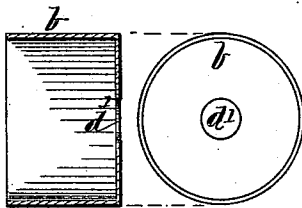


FIG. 5

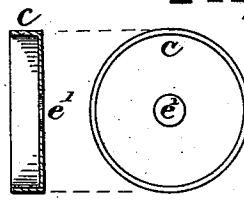


FIG. 6

Witnesses.

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EDWARD WRIGHT, OF WORCESTER, ASSIGNOR TO THE DAVIS & FURBER MACHINE COMPANY, OF NORTH ANDOVER, MASSACHUSETTS.

TOP ROLL FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 395,938, dated January 8, 1889.

Application filed September 10, 1888. Serial No. 284,970. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WRIGHT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Top Rolls for Spinning-Machines, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

My present invention relates to the construction of the top roving delivering-rolls which are employed in wool-spinning machines such as described in my Letters Patent No. 370,840, and other similar mechanism; and the object of my invention is to provide top rolls adapted for the purpose specified, which shall be light in weight, of strong and durable construction, and which can be manufactured with facility and at comparatively small cost; also, to afford a construction which will give practical uniformity in the size and weight of the rolls and facilitate constructive duplication throughout an unlimited series without requiring special care in fitting or the necessity of turning or grinding off the peripheral surface to render the rolls concentric, uniform, and in balance on their axles. These objects I attain by rolls, the parts of which are constructed and combined in the peculiar manner hereinafter explained.

In the drawings, Figure 1 is a perspective view of my improved top roll for wool-spinning machines. Fig. 2 is a longitudinal central section of the same. Fig. 3 is an end view. Fig. 4 is a side view of the arbor separate. Figs. 5 and 6 show details of the cup-shaped parts separate, and Figs. 7 and 8 are sectional views showing the arrangement of these top rolls on the spinning-machine.

My improved top roll is composed of a journal, axle, or arbor, A, provided at each end with a roller-head, B, formed of cup-shaped cylinders *b* and *c*, which are respectively punched and drawn from thin sheet metal in the manner of seamless die-drawn ferrules and fitted together and combined with the axle-bar in the manner illustrated.

The axle A is formed with a central bear-

ing-surface, *a*, and with ends that are reduced or turned off to form shoulders *d* and *e*, as shown in Fig. 4. The peripheral surface of the roller-head B is formed by the cylindrical shell or thimble *b*, which is punched and drawn up from sheet metal to the size required for the length and diameter of the roll, and a hole, *d'*, is formed through its end or disk axially concentric with the periphery and of a size that will fit close upon the arbor A adjacent to the shoulder *d*. The second cylindrical cup-shaped shell, *c*, is of similar structure but of less length and diameter, and is fitted tightly within the end of the cylinder *b*. The end disk of the cup *c* is provided with an axially-concentric hole, *e'*, that will fit closely onto the end of the arbor against the shoulder *e*. The thickness of these sheet-metal cups is preferably about three-sixty-fourths of an inch, and such cups or shells being drawn in suitable dies are all of a uniform shape and diameter of their respective kinds.

When putting the rolls together, the cylindrical parts *b* and *c* are slipped or driven onto the ends of the arbor A, the rim of section *c* fitting tightly within the end of section *b* and each fitting snug upon arbor A against its respective shoulder. The end of the arbor A is then riveted or upset at E, thus firmly binding the parts together in a secure and rigid manner, the adjoining cups, *b* *c*, forming a hollow cylindrical head or roller, B, at each end of the arbor with the bearing or journal *a* between the two. These rolls when in use on the spinning-machine are held in proper relation to the bottom roll, F, by a supporter, I, that is attached to the roving-beam or carrier K, and which embraces the axle-journal *a*, as illustrated in Figs. 7 and 8, the mechanism operating as described in my Letters Patent No. 370,840, above referred to.

I am aware that hollow rolls have heretofore been employed and that rolls connected in pairs are in use, and it will therefore be understood that I do not broadly claim such features in a roll of other construction than that illustrated and described.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. A top roving-roll for spinning-machines,

consisting of the axle-arbor A, having upon each of its ends a roller composed of two sheet-metal die-drawn cups, *b* and *c*, fitted one within the other and concentrically fixed upon
5 said arbor, substantially as described.

2. In a top roving-roll for wool-spinning machines, the combination, with the axle-arbor A, having the bearing portion *a* and shoulders *d* and *e*, of the pair of rollers B, each
10 composed of the cylindrical die-drawn sheet-metal cup *b*, fitted upon the arbor against the shoulder *d*, and the die-drawn sheet-metal

cup *c*, fitted upon the arbor against the shoulder *e*, with its peripheral rim fitting within and supporting the rim of the cup *b*, and retained by riveting the end of the arbor at E,
15 substantially as set forth.

Witness my hand this 4th day of September, A. D. 1888.

EDWARD WRIGHT.

Witnesses:

CHAS. H. BURLEIGH,
ELLA P. BLENUS.